Yifeng Ding

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Education

University of Illinois Urbana-Champaign (UIUC), Illinois, USA *Aug 2022 - Now*

Ph.D. in Computer Science

- **Research Experience:** Improving software engineering with generative models [1,2,3,4,5]

Tsinghua University, Beijing, China *Aug 2018 - July 2022*

B.S. in Software Engineering

- **Awards:** *Research Excellence Scholarship* (2021), *Academic Excellence Scholarship* (2019)
- **Research Experience:** Deep learning system testing [6,7]

Double Major: Business Administration (For Second Bachelor's Degree)

Publications and Patents

[1] Yifeng Ding, Jiawei Liu, Yuxiang Wei, and Lingming Zhang: "XFT: Unlocking the Power of Code Instruction Tuning by Simply Merging Upcycled Mixture-of-Experts". Annual Meeting of the Association for Computational Linguistics, 2024.

[2] Yuxiang Wei, Zhe Wang, Jiawei Liu, **Yifeng Ding**, and Lingming Zhang: "Magicoder: Source Code Is All You Need". International Conference on Machine Learning, 2024.

[3] Jiawei Liu, Jia Le Tian, Vijay Daita, Yuxiang Wei, **Yifeng Ding**, Yuhan Katherine Wang, Jun Yang, and Lingming Zhang: "RepoQA: Evaluating Long Context Code Understanding". Workshop on Long-Context Foundation Models, 2024.

[4] Jiawei Liu, Songrun Xie, Junhao Wang, Yuxiang Wei, **Yifeng Ding**, and Lingming Zhang: "Beyond Correctness: Exercising Language Models for Efficient Code Generation". Conference on Language Modeling, 2024.

[5] Chunqiu Steven Xia, **Yifeng Ding**, and Lingming Zhang: "The Plastic Surgery Hypothesis in the Era of Large Language Models". IEEE/ACM International Conference on Automated Software Engineering, 2023.

- **Summary:** For my research experience at UIUC, I focus on improving software engineering with generative models, including proposing new techniques to improve generative models for software engineering tasks [1,2,5] and constructing new benchmarks to evaluate the performance of generative models on software engineering tasks [3,4].

[6] Quan Zhang, Yongqiang Tian, **Yifeng Ding**, Shanshan Li, Chengnian Sun, Yu Jiang, Jiaguang Sun: "CoopHance: Cooperative Enhancement for Robustness of Deep Learning Systems". ACM International Symposium on Software Testing and Analysis, 2023.

[7] Quan Zhang, **Yifeng Ding**, Yongqiang Tian, Jianmin Guo, Min Yuan, Yu Jiang: "AdvDoor: Adversarial Backdoor Attack of Deep Learning System". ACM International Symposium on Software Testing and Analysis, 2021.

- **Summary:** For my research experience at Tsinghua University, I focus on testing deep learning systems, including testing the performance of deep learning systems given artificial patterns on specific training data [7] and enhancing the robustness of deep learning systems [6].

Work Experience

Amazon.com Inc., Applied Scientist Intern (Part-time) *Aug 2024 – Now*

- **Project:** Applying the generative model developed in the summer internship to software engineering tasks

Amazon.com Inc., Applied Scientist Intern *May 2024 – Aug 2024*

- **Project:** Improving the coding capability of the generative model

Awards, Interests, Skills, and Community Involvement

- **English Proficiency:** TOEFL 108, GRE 322 (V152 + Q170) + AW4.0
- **Programming Skills:** C/C++, Python

Professional Certifications

None